

Supporting Information:

**Isolation and Characterization of a New Type of Biomimetic  
 $\mu$ -Hydroxy-bis-Zn(salphen) Sandwich Structure**

Daniele Anselmo,<sup>†</sup> Eduardo C. Escudero-Adán,<sup>†</sup> Jordi Benet-Buchholz<sup>†</sup> and Arjan W. Kleij<sup>†,‡,\*</sup>

<sup>†</sup> Institute of Chemical Research of Catalonia (ICIQ), Av. Països Catalans 16, 43007 Tarragona, Spain

<sup>‡</sup> Institució Catalana de Recerca i Estudis Avançats (ICREA), Pg. Lluís Companys 23, 08010 Barcelona, Spain.

E-mail: [akleij@iciq.es](mailto:akleij@iciq.es)

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Figure S1

Comparison between the spectra of free Zn(salphen) **1** and complex **(1)<sub>2</sub>·NBu<sub>4</sub>OH** (aromatic region – upper, and aliphatic region – lower spectrum): all in (*d*<sub>6</sub>-acetone)

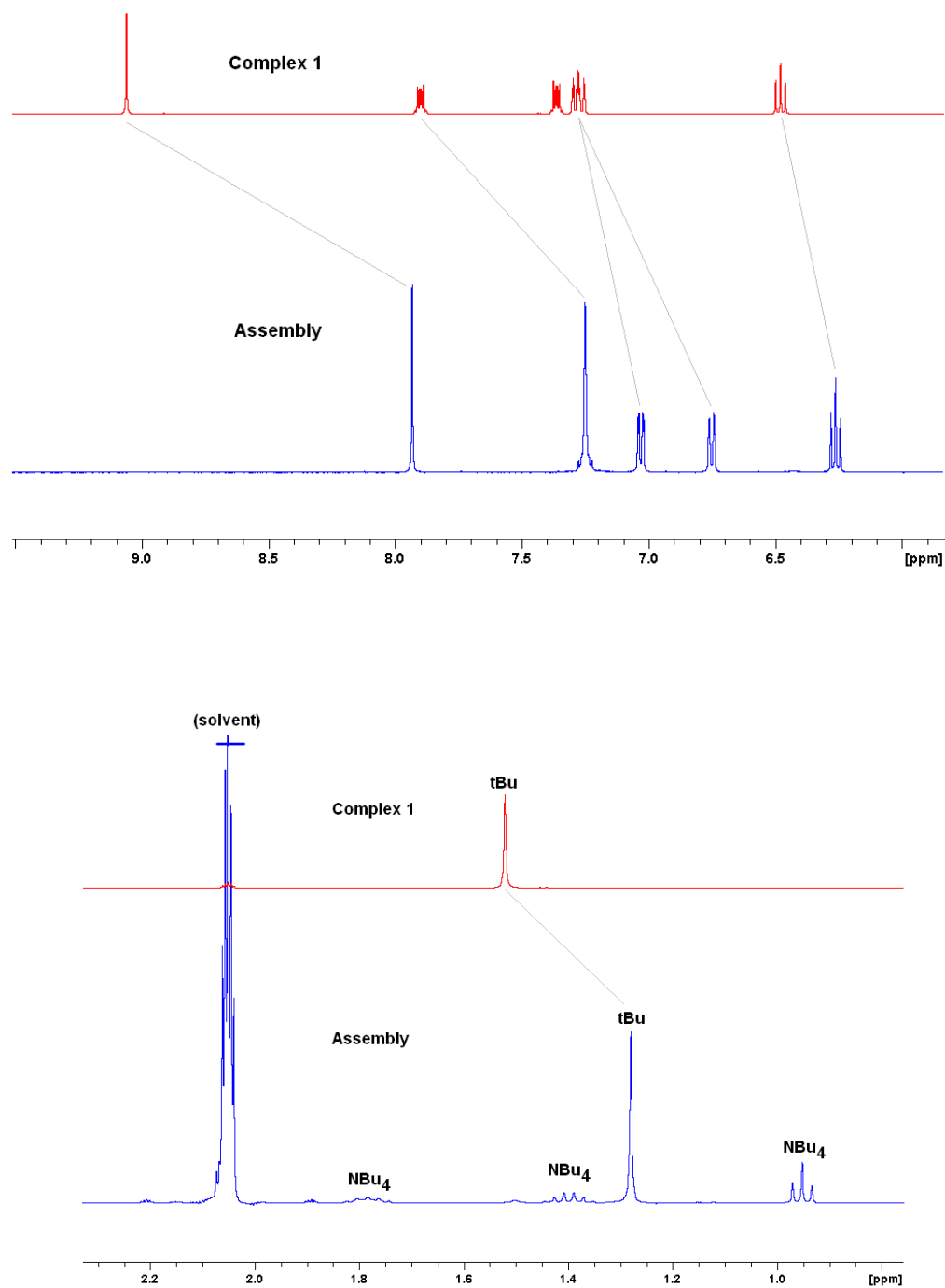


Figure S2

NOESY of assembly  $(\mathbf{1})_2 \cdot \text{NBu}_4\text{OH}$  ( $d_6$ -acetone)

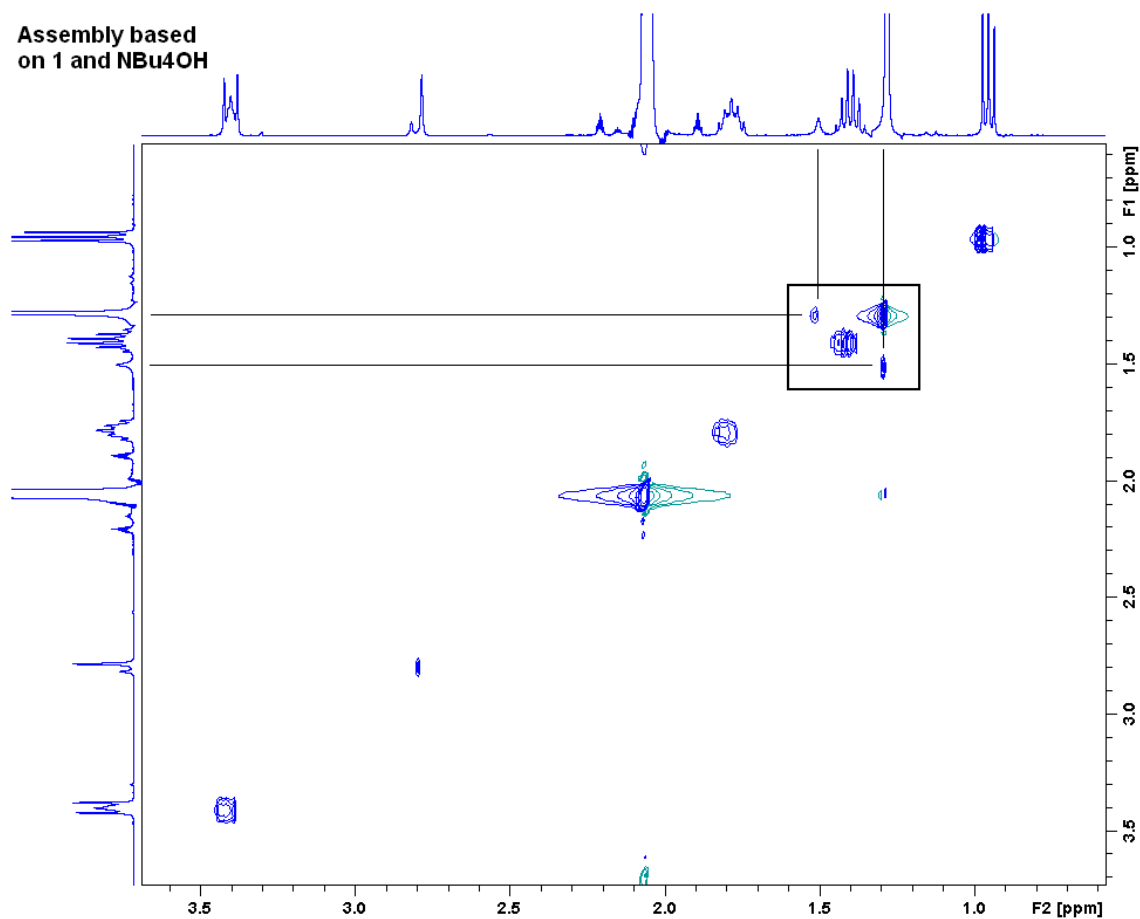
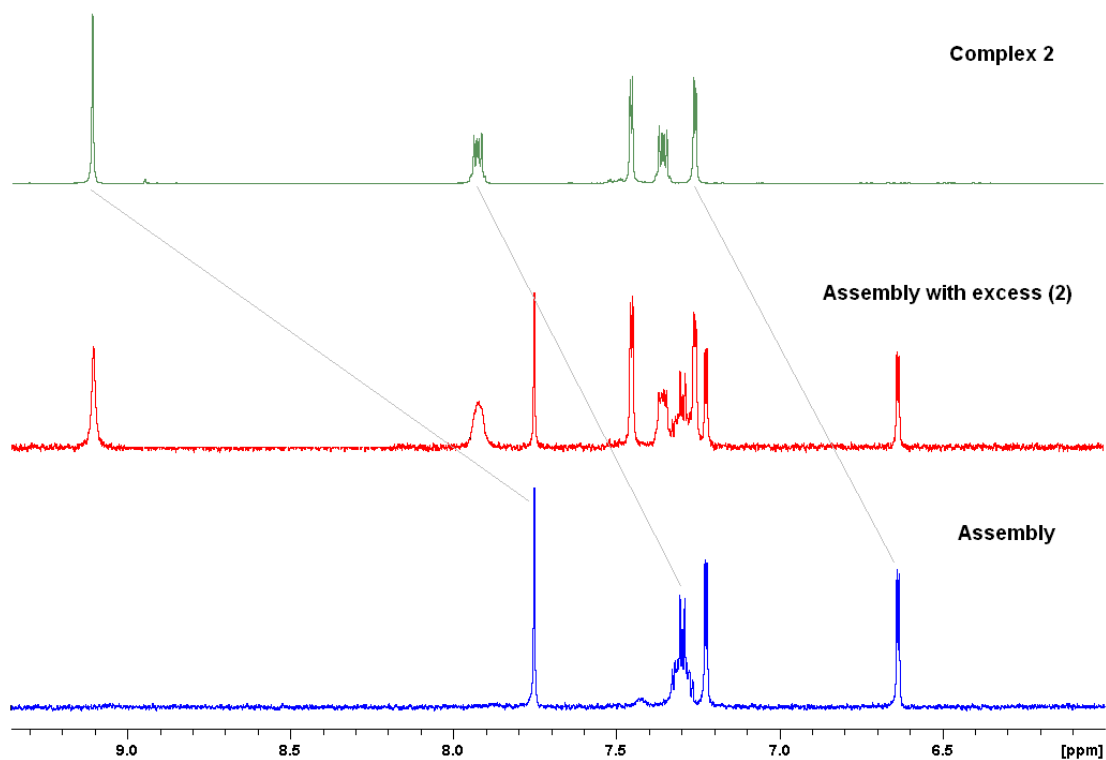


Figure S3

$^1\text{H}$  NMR comparison with assembly  $(\mathbf{2})_2\cdot\text{NBu}_4\text{OH}$  ( $d_6$ -acetone)



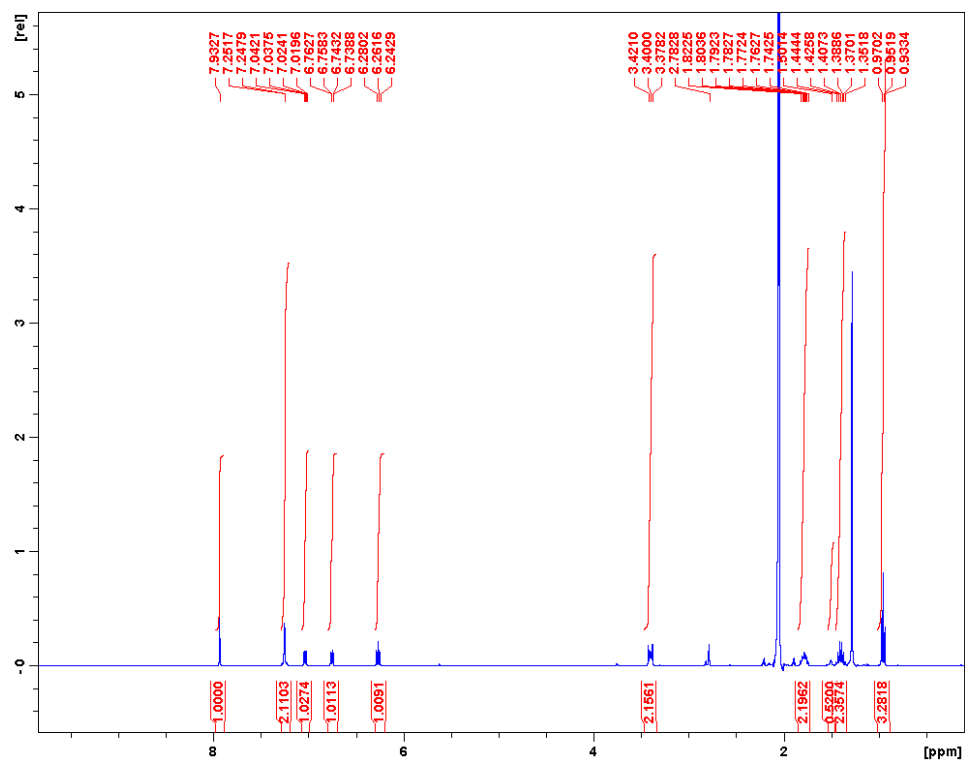
In green: Complex  $(\mathbf{2})$

In red: Assembly  $(\mathbf{2})_2\cdot\text{NBu}_4\text{OH}$  with 3 equiv of free  $(\mathbf{2})$

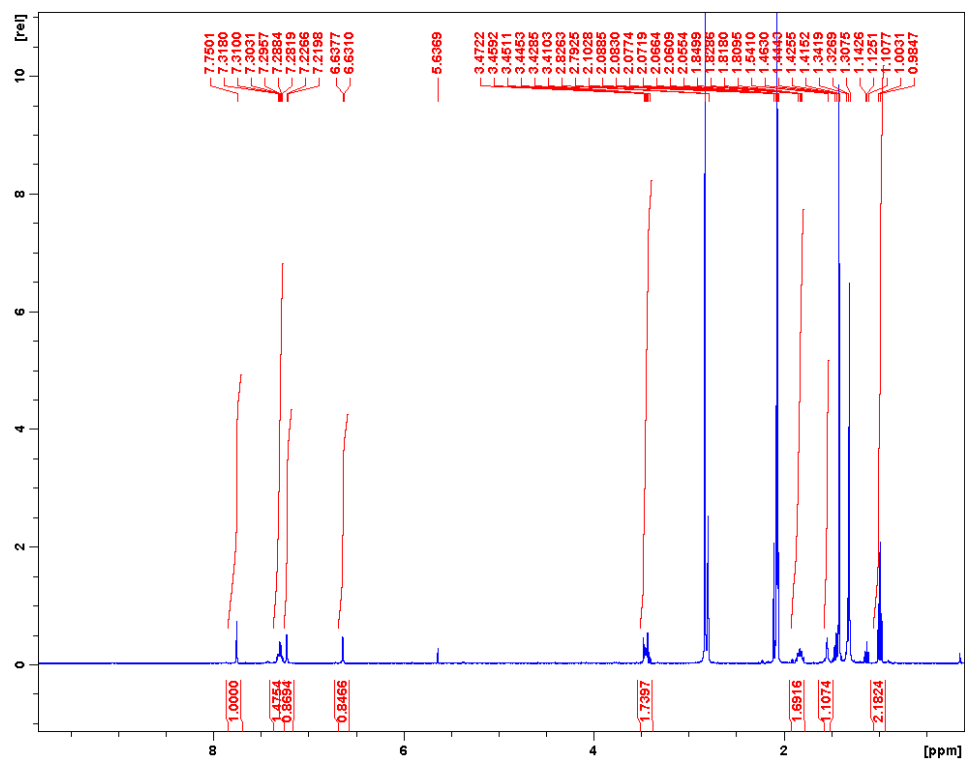
In blue: Pure assembly  $(\mathbf{2})_2\cdot\text{NBu}_4\text{OH}$

# <sup>1</sup>H NMR spectra of assemblies (1)<sub>2</sub>·NBu<sub>4</sub>OH and (2)<sub>2</sub>·NBu<sub>4</sub>OH.

(1)<sub>2</sub>·NBu<sub>4</sub>OH (*d*<sub>6</sub>-acetone):

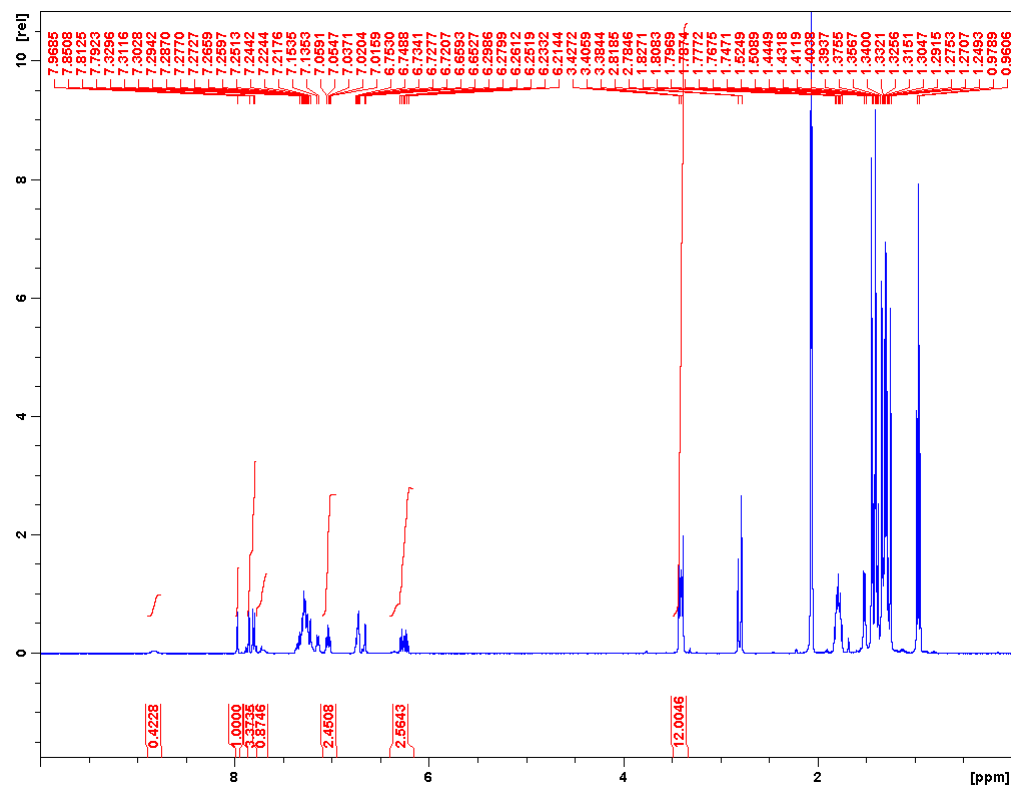


(2)<sub>2</sub>·NBu<sub>4</sub>OH (*d*<sub>6</sub>-acetone):

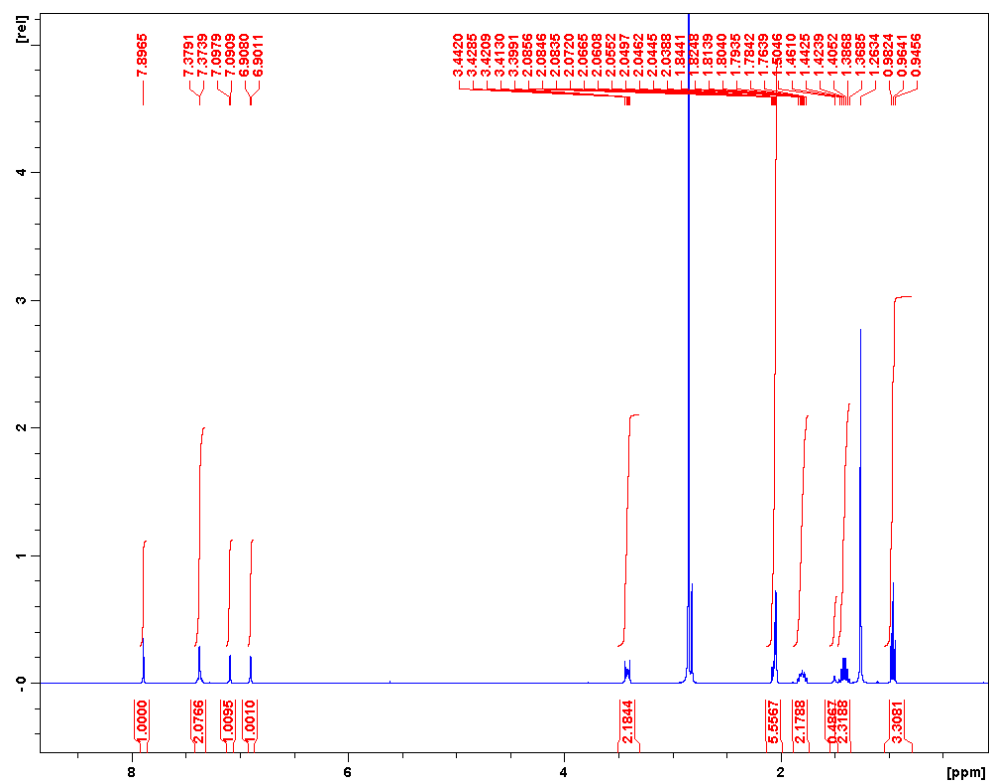


<sup>1</sup>H NMR spectra of assemblies (3)<sub>2</sub>·NBu<sub>4</sub>OH, (4)<sub>2</sub>·NBu<sub>4</sub>OH and (5)<sub>2</sub>·NBu<sub>4</sub>OH

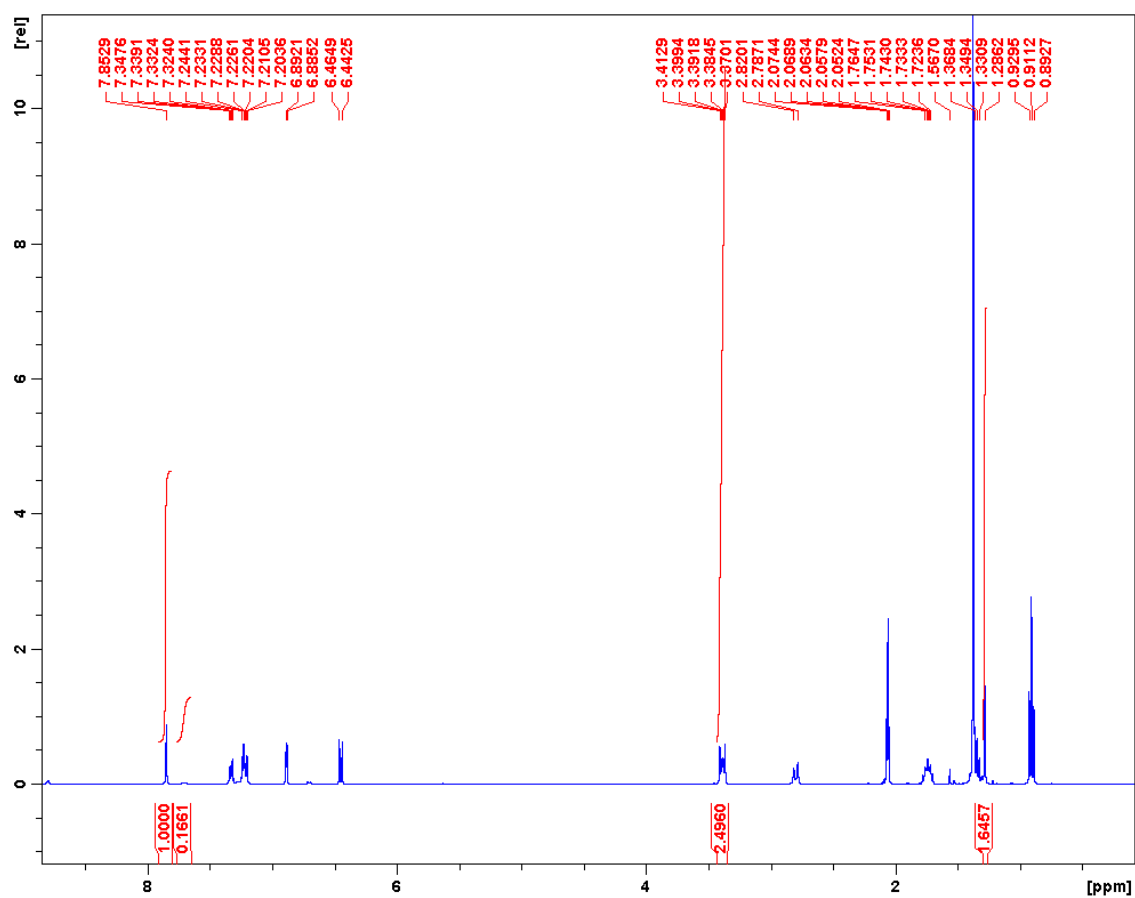
**(3)<sub>2</sub>·NBu<sub>4</sub>OH** (*d*<sub>6</sub>-acetone):



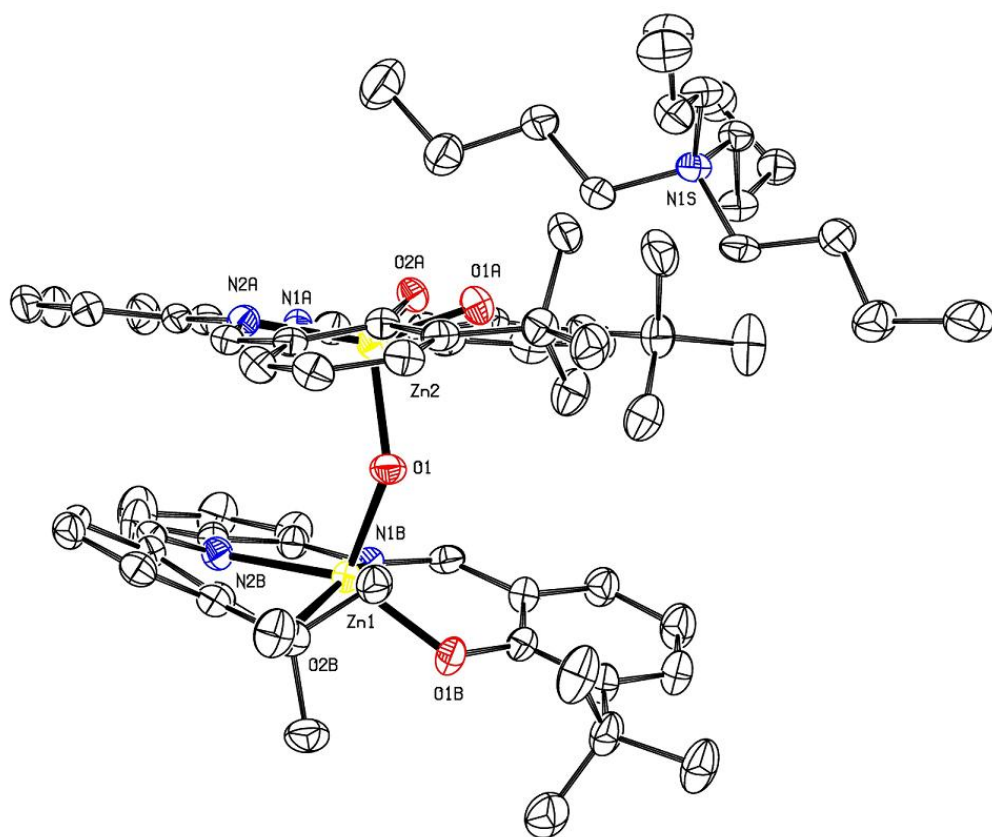
(**4**)<sub>2</sub>·NBu<sub>4</sub>OH (*d*<sub>6</sub>-acetone):



(5)<sub>2</sub>·NBu<sub>4</sub>OH (*d*<sub>6</sub>-acetone):

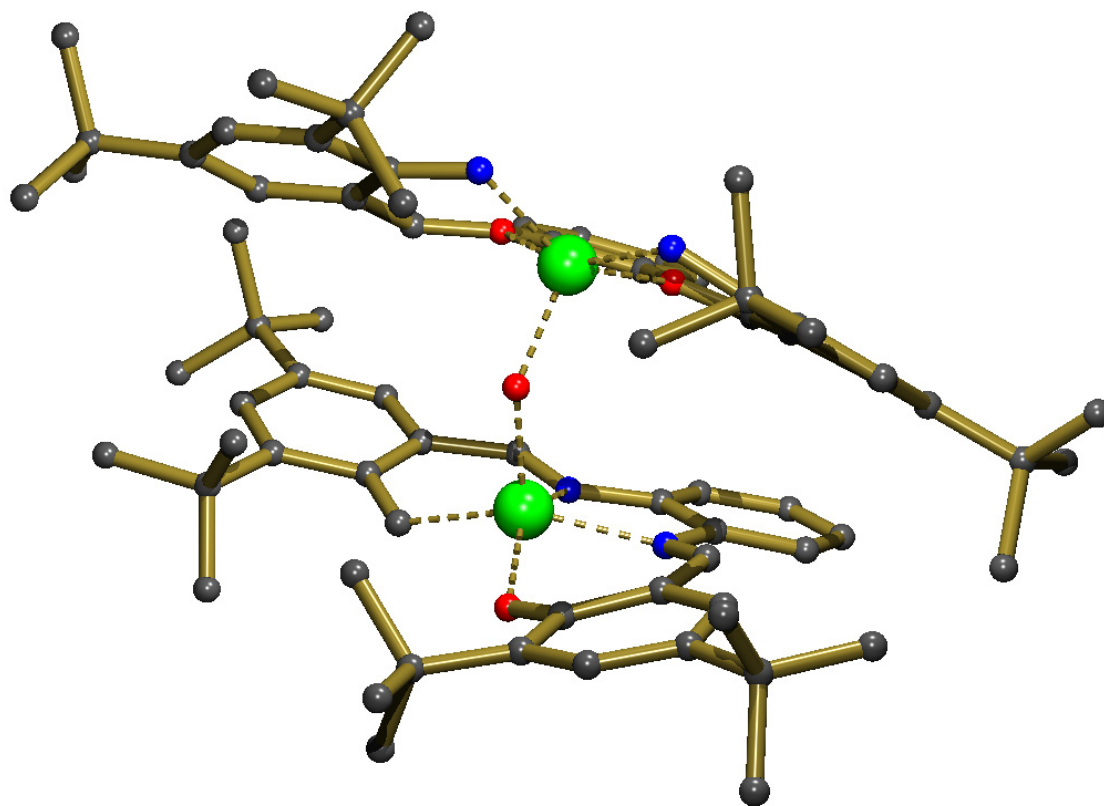


Displacement ellipsoid plot of structure  $(\mathbf{1})_2 \cdot \text{NBu}_4\text{OH}$ .





Molecular structure determined for assembly  $(\mathbf{2})_2 \cdot \text{NBu}_4\text{OH}$ .



$R1 = 0.137$

The structure could not be completely refined. Please note that the  $\text{NBu}_4$  cation is here omitted for clarity.